

MICHIGAN FARMER.

Devoted to Agriculture, Horticulture, and Domestic and Rural Affairs.

NEW Perfect Agriculture is the foundation of all Trade and Industry.—Liebig. SERIES.

VOL. V.

DETROIT, OCTOBER 27, 1847.

No. 9.

Buffalo Wool Depot.—Fine wool in Kalamazoo.

LETTER FROM MR. PETERS.

GENTLEMEN—Some friend has sent me the "Farmer," for August 23, wherein you have been so kind as to give a notice of my Wool Depot.

The enterprize is a new one, and has had to encounter many obstacles this year. But it has succeeded beyond my most sanguine expectations. I have been quite as well patronized as I could expect, and sales have all been made at good prices.

The plan which I adopted, and which experience tells me, so far, is the best, is to sort the wool in the fleece into 10 sorts. Full blooded Merino is No. 1, and from that, I grade down to No. 5, which is the coarsest common wool.—Saxony grades into extra, prime 1, and prime 2. Then I make combing and delaines.

If the wool be in bad condition, it grades down; if unwashed, one-third is deducted. Burry wool had better be kept at home, or if sent, kept by itself.

I have had wool sent me from six different States, and of course have had a great variety. The best entire clip was from Michigan, and it will favorably compare with the best flocks in the Union. It is from Mr. John F. Gilkey, of Richland, Kalamazoo Co. More than half of his clip, nearly six thousand pounds, went into extra and prime 1, and will net him from 55 to 65 cents per pound. I have examined the best flocks through the country, and so well am I satisfied of the value of his sheep, that I have ordered a buck from his flock for our own use.

It should be impressed upon the mind of every wool grower, and every farmer West should be one, that he cannot grow too fine wool. But in growing fine wool, do not go for heavy, gummy fleeces. Get a good length of staple and coarse fleece. It costs no more to send a pound of good, clean, fine wool to market, worth 50 or 60 cents per pound, than a coarse dirty fleece, worth not more than 20 or 22 cents per pound.

Wool has borne a very good price all the season. My last sales are, for No. 1, 42 cents; No. 2, 36 cents; No. 3, 32 and 33; No. 4, 29 cents; No. 5, 26 cents; prime 1, 47 cents.

Should the farmers in Michigan become satisfied of the importance of the Depot here, I hope they will remember me next year.

Buffalo, Oct. 14, 1847.

Butter and Churning.

September and October are the months for butter. The weather is now cooler and the milk will keep longer than in August. Many farmers make their cheese in July and August, and in those months make no butter.

In some of the middle States it is a common practice to churn the milk soon after it comes from the cow, adding something to curdle the milk a little; but this is not the best way to make butter, for it requires too much labor to churn.

The labor of churning is much diminished by bringing the cream to a proper temperature at the commencement of the process. About sixty degrees is the mark that should be indicated by a thermometer. Some make it a little warmer, sixty-five degrees. Sixty-two degrees will answer well, and every one should have a thermometer at hand when butter is made.

If the cream is too warm the butter comes too quick and too soft, and it is quite difficult to separate the milk from it. If the cream is too cold, the labor of churning is great, and the quantity of butter is small. The cream should not be set very near a fire when it is cold. A gradual warming should take place, and a cool day in October the cream may stand half a day in a room of the right temperature as shown by a thermometer hanging near the churn. But a surer way is to dip the glass into the cream to determine its warmth.

While the cream is in the pots waiting for churning day, it should be stirred thoroughly at least once a day, as this prevents its moulding and makes the churning easier. The cream must not be rapidly warmed when it is too cold, for some of the particles will melt and injure the butter as well as increase the labor of churning.

As soon as the butter is well gathered the butter-milk should be turned off and pure water should be turned in to take its place. The churning must now be resumed for a few minutes and then the water must be turned off. This should be repeated till the water ceases to look milky. The butter may then be salted as high as one ounce to the pound, for on the second working of the butter the salt is partly lost in the milky matter that is worked out.

The labor of working over the butter to separate every particle of milk from it, is arduous, as the butter is now hard and unyielding. A brake therefore, something like the brake that bakers use in working bread, should be kept in all large

dairies. The cost is not great. A stone platform is best, and the lever may be fastened at one end to a staple in the stone.

It is now agreed that butter may be worked over so much as to injure it; yet it must be worked long enough to rid it of the milk. When it is well washed in cold water if there are any liquid particles left they will not putrify as milk will, for the matter will be brine rather than salted milk.

Many object to the use of water, and think the flavor of the butter is injured by it. But we can see no good reason for the objection, and we know that water does not spoil it, for water-washed butter obtains the highest premiums as often as butter unwashed. Water does not mingle with oily matter.

Some years ago we suggested the propriety of using a brake to work butter. We now hear that they are common in some places.

We advise beginners not to be in too great haste in the commencement of churning. If the cream is agitated violently at first it foams and prevents the proper jostling of the particles together. Begin slowly and you will have the more weight of butter.—*Mass. Ploughman.*

From Colman's European Agriculture.

Horses—Oxen.

Among the most improved animals in the kingdom, horses take a prominent place; and a circumstance of difference, in this matter, between England and the United States, which strikes one at first sight, may be called the division of labor among the horses. The American horse, in most of the States, is, generally, a horse of all work. Here, the horses are bred and trained for, and exclusively confined to, particular departments, sporting, pleasure, travelling, draught or agricultural labor; and nothing is more rare, than the transfer of the animal from one department to the other. So we find the race-horse, the hunter, the carriage horse, the draught horse, the roadster, the saddle horse, the pony for children and ladies, the general hack, and the farm horse. This comes of the immense wealth of the people, and is adapted to give them the best advantages of each kind. It may surprise some of my friends, to tell them, that I have more than once found forty hunting horses in one gentleman's stable, for himself and his huntsmen; and in one instance, I found a stud of eighty horses, of different kinds, exclusive of the farm horses. The perfection to which these animals have been brought, the condition in which they are kept, the tenderness, and kindness, and care, with which they are treated, and the admirable manner in which they are groomed, are circumstances, here, all over the country, in the highest degree worthy of remark. I have already referred to them. Their hours of rest, of feeding, and labor, are observed with strictness; their stables are spacious, lofty, well ventilated, and adapted to

preserve, as far as may be, an equable temperature; they are carefully bedded, and cleanly littered, and whatever would be offensive, at once removed; they are thoroughly curried and brushed, and a horse brought into the stable in a state of perspiration, is never left until he is completely dried by rubbing; nor in any case, have I seen a horse left to stand still, exposed to a cold draught of air. The treatment of them is most exemplary and creditable; and is no more than just to animals, incapable of taking care of themselves, to whom we are indebted for so much of pleasure and so much of profit. At the house of an eminent nobleman, whose hospitality I enjoyed, it was the invariable custom of the family,—ladies and guests, as well as the master,—about nine o'clock in the evening, to go, by a covered passage, into the stables, where thirty horses were kept, to see that the grooms and ostlers were at their post, that the horses were well, and cared for, and the stable in good order. Nothing could exceed the cleanliness and order in which every thing appeared. At one of the principal breweries in London, where forty of the largest size dray-horses are kept, the manager informed me that, after six years hard service, the horses receive their freedom, are sent into the county, exempted from all labor, and kindly cared for during the rest of their lives. I confess, in observing these kind provisions and this extraordinary care, I have not been able to suppress the wish, that many of the bipeds, who share with these animals in the labor of the field,—not unfrequently performing the hardest part of it,—could experience, in their own persons, an equal care, and find in their cottages, on their return from a hard day's work, even a moiety of the comforts with which the stables of their co-laborers are provided. It would be doing great injustice, to say that this is not often done by many persons, who have no greater pleasure than in providing for the comfort and welfare of their dependants. It is only to be regretted that the practice is not universal.*

In the breweries in London, and in the drays in the cities, horses of an enormous size are employed; and the same kind of horses are employed on many of the farms. The weight of one of them, ascertained in my presence, exceeded seventeen hundred pounds; and he was by no means extraordinary for size. I do not desire to see

* No person can have passed through the highly improved territory of the Duke of Buccleuch, in Dumfriesshire, which the public road traverses for more than twenty miles, and observed the clean and comfortable cottages of the laborers, which constantly meet the eye; nor have seen the almost luxurious provision made by the Duke of Devonshire for his dependants, in his picturesque village of Edensor; nor the humane provision made by the late Lord Leicester for his aged and decayed laborers, at Hotham; nor have witnessed the extraordinary and beneficent exertions of Lady Noel Byron, by allotments, loan, and benefit societies, and industrial schools, for the comfort, instruction, and improvement of her dependants and the poor; nor the beneficent and parental conduct of many, many others, to whom the strong and unaffected attachment of their laborers and dependants evinces the deepest sense of kindness, but whose names it might seem invidious to mention,—without a grateful acknowledgment of the goodness of Heaven, in making minds so just and generous the almoners of its bounty.

such horses introduced among the farmers of the United States. Their motion is slow and clumsy, and their keep expensive. In cities, where the vehicles are heavy, and the burdens of coal, and beer, and other goods, very great, they are well suited to the service for which they are used. As far as proportion, color, and action, are concerned, they are, certainly, magnificent animals. With many farmers, these horses are raised, not as being preferred for farm labor, but for sale in the cities; and after being broken to service on the farm, are, at a proper age, sent to market.

But the horse best adapted to agricultural purposes is of a smaller size, a compact form, short, strong, and muscular limbs, full-breasted, and with round buttocks. There are three breeds of horses in the kingdom, distinguished for their valuable properties as farm horses; these are the Cleveland Bay, a horse of great strength, and good size and figure; the Suffolk Punch, a large and serviceable horse; and especially the Clydesdale horse, almost exclusively preferred among the excellent farmers of Scotland, particularly in the Lothians. I have seen nothing superior, in my humble judgment, to the last horse, for farm labor, combining good size, with compactness, strength, and action. In Ayrshire, the farmers being of the opinion that their fine breed of horses was deteriorating, recently imported a stallion from Flanders. This horse was a model of compactness and strength. He was fifteen and a half hands high; his girth, behind his shoulders, was seven feet four inches, and seventy-five inches round his neck, at the base; he was twelve years old, and cost sixty guineas, in Flanders.

The farm horses in ploughing, are never worked more than eight hours a day. The ploughman feeds and cleans them at four o'clock in the morning. They are harnessed and the plough started at six o'clock. They are brought to the stable again at two o'clock, and fed, and thoroughly groomed, curried, cleaned, bedded, &c., and left for the night, at dark. The feed is almost always cut for them, or if given long, given in small quantities; and the oats and beans are crushed. On one farm, the allowance for a farm horse of the largest size was, two bushels of oats, and one peck of beans, and two trusses of hay,—fifty-six pounds each,—per week, in winter; in summer, green feed, vetches, clover, or rye grass, was substituted for the hay. The general allowance is a peck of grain, half oats and half beans, and fourteen to sixteen pounds of hay, per day. The army allowance for a horse is fourteen pounds of hay, ten pounds of oats, and seven pounds of straw, per day; "with hard work, less hay and more corn; with little work, less corn and more hay." The horses belonging to the Queen's Guards, which are often to be seen in the streets of London, and always on state occasions, are beautiful animals, and subjects of universal admiration. They are of a black color, and bred, I

believe, on the continent, purposely for the army.

The general rule is, to keep, on arable farms, a pair of horses for every forty acres; in some cases the proportion of land to the team is larger. One of the best farmers in Scotland allows seven horses for two hundred acres. His land is accessible, and extremely favorable for all farming operations. The cost of keeping a working horse—exclusive of interest or deterioration—he estimates at twenty-five pounds, or more than one hundred and twenty dollars per year. These expenses all have reference to the local prices of agricultural products; and I give them rather as matters of curiosity, than of direct utility to my American readers. The amount of ploughing for a day's work is an acre of land, but in some cases, an acre and a half. One farmer speaks of ploughing, usually, seven acres in a week, with one pair of horses. The furrow slice varies from eight to eleven inches, and the distance travelled in such case, is from twelve to sixteen miles a day. It does not lie within my province to speak of other horses than those employed in agricultural labor.

Oxen are employed for farm labor to a small extent, and in few counties. On Lord Leicester's farm, at Holkham, so much and so long celebrated, they are used and worked in leather harness; and in some places I have seen them worked singly in harness. The general impression is, that they will not do so much work as horses, are not so easily trained, and are more expensive to keep; every one of which positions is, in my opinion and experience, erroneous. I believe these opinions arise out of an entire ignorance of the training of oxen. Nothing can be more awkward than the management of them, which I have seen here. As they are managed and trained in the best parts of New England, their docility is perfect; working without a driver, in the plough-field, as well as with one; performing as much work as a pair of horses, and performing it as well; costing comparatively nothing for harness, since a wooden yoke and bows, and iron chains, which will last for years, are all that are required; when well cared for until six years old, paying, by their growth, for the feed which they consume; and when kept in good condition, as they always should be, if ruined for work by any injury, or if at an age to be turned off for beef, exposing their owner to no loss. In every thing but road work, I am quite satisfied that a pair of well trained oxen will perform as much work as a pair of horses, and at a much less expense. This was the opinion of an English ploughman, who lived some time in my service, and worked wholly with oxen. He had before this, been used to horses, and a more skilful ploughman I have never seen on either side of the water. The use of oxen has become much less common than before the introduction of the improved breeds of cattle, which are now brought so early to maturity. Formerly, it was not the

custom to send oxen to market, before five years old; now the Durham stock, and others, go at eighteen months to three years old. Under this arrangement, there is no opportunity to get any word out of them.

The Scotch plough with two horses abreast, and seldom use more than two. In many parts of England, horses are worked *tandem*; and I have sometimes seen five and six, at length, to a single plough. This is certainly excessive, and the turnings, in such case, most inconvenient; but the motive for putting the horses at length is, that, where the land is heavy, it may not be trodden hard.

Peat or Muck for Manure.

The great value of bogs in this country, however, consists in their affording manure. We shall enter into no particular discussion, at this time, in regard to the specific operation of peat or muck in benefitting vegetation—whether its action is wholly mechanical, producing in the soil the requisite physical texture, or whether the substance is actually “dissolved” and absorbed by growing plants—its utility in augmenting the yield of various crops, has been abundantly demonstrated.

It is, perhaps, proper to make a distinction between peat and muck, though the terms are frequently used synonymously. Peat should be considered as referring more particularly to the composition of bogs, and which has become so solid that when it is cut in pieces they will retain their form; and muck to the loose matter which has been accumulated from leaves, or the washings of woods and fields.

The value of these substances as manure, especially for immediate use, varies greatly, according to their origin. The muck found in ash, maple, or elm swamps, or which is formed by the leaves and small branches of hard wood trees, is usually far better than that found in pine, cedar, or hemlock swamps, or in legitimate peat bogs. The former will generally produce excellent effects on most crops as soon as it is applied; the latter must have time for decomposition, and generally requires to be mixed with some substances which will assist the development of its fertilizing qualities. It is frequently remarked, that muck from the localities last mentioned, is sour; and chemical investigation has shown that it does in fact contain an acid, which is called *tannin*.—The bark of oak, and of most hard wood trees, contains this principle; but when the bark or trees decay, the acid is soon dispelled by the action of the air and rain. With the remains of resinous trees, such as pines, cedars, &c., it is not so. Either from the acid being combined with resin, or from some other cause, it is much less soluble; and muck which is mixed with the rubbish of these trees, produces at first rather injurious effects. The refuse of wood-piles, com-

posed of chips and bark chiefly from pine, is sometimes applied to land as manure; but the yellow color and stunted appearance of vegetation in such cases, shows that the application was rather poisonous than beneficial.

In many situations, we believe that the substance of swamps and bogs constitute the best and cheapest material which can be used, to a certain extent, for enriching the soil. Its application is attended with the greatest benefit on such lands as contain least vegetable matter; and it so happens, fortunately, that those portions of the country which are most deficient in this respect, are generally best supplied with the article to which we refer. The question is, how can it be used to the best advantage? We have before remarked that some kinds of muck operate beneficially as soon as they are applied, and without admixture with any other substance. Such, however, is not very abundant, and with that which is ordinarily met with, the case is different. The acid must be got rid of, and the vegetable food which the peat or muck contains, rendered soluble.—There are several ways in which this article may be usefully compounded, some of which are the following:

1. Composted with animal manure. This mode has been practiced more or less for many years. Lord Meadowbank's experiments, more than forty years since, proved the value of peat compost. He found that any substance which would occasion a fermentation of the peat, would render it good manure; but stable or barn-yard manures were mostly used. He found that one load of manure would ferment three loads of peat; but it is evident that the proportions must vary, according to the strength of the manure and its tendency to heat, and the sourness of the peat. The peat and manure are laid in a pile, in alternate layers. It is best to dig the peat in autumn, when the bogs are usually driest. The compost may be formed in spring, and will ferment sufficiently to be used for crops in three or four weeks, according to the state of the weather—the change being, of course, most rapid in a high temperature.

Elias Phinney, Esq., of Lexington, Mass., one of our most judicious farmers, has ascertained that a cord of green dung will convert twice its bulk of peat into manure of equal value to itself.

The beneficial action of the manure in this case is ascribed to two causes. The ammonia of the manure being an alkaline salt, neutralizes the tannin, and the heat, in connexion also with the ammonia, renders the vegetable nutriment of the peat soluble. It is undoubtedly one of the best modes in which the farmer can use peat or muck. But he should never lose sight of the importance of using a sufficient quantity of muck in his stables and yards, to absorb and prevent the waste of all liquid manure.

If vats or reservoirs are formed for the reception of urine, the liquid may be used with ex-

cellent effect on peat. Urine is richer in ammonia than dung, and its action on peat is consequently more powerful. Cheever Newhall, Esq., of Dorchester, Mass., prepares large quantities of peat in this way, and considers a cord of peat saturated with a hogshead of urine, more valuable for any crop, than a cord of any kind of dung made on the farm.

2. Doctor Dana, in his *Muck Manual*, observes that—"the power of alkaline action is alone wanting, to make peat good cow dung,—that "by the addition of alkali to peat it is put into the state which ammonia gives to dung." The effect of alkali is undoubtedly similar to that of the ammonia of manure. Its chief value probably consists in its neutralizing the acid of the peat, though, as Dr. D. observes—"the solubility of geine (vegetable mould,) is wonderfully increased by the action of alkalies."

Of the alkalies to be used, Dr. Dana gives the preference to wood-ashes, soda, (or white ash,) and potash; and the proportions in which he recommends these substances to be used, are—for a cord of peat, 16 to 20 bushels common house ashes, or 92 lbs. pot or pearl ash, or 61 pounds of soda. The alkalies to be dissolved, and the solution applied to the peat in layers, as the heap is being made up.

Leached or spent ashes may be used instead of the articles above named, but the quantity must be proportionately greater. Dr. Dana refers to George Robbins, of Waterford, Mass., who used for four years no other manure than one part of barilla spent ashes to three of peat, mixed together. The peat was dug in the fall and mixed in the spring. Mr. R. kept eleven horses, four cows, and one hundred hogs, but sold all their manure, and used only the compost on his land, which was a sandy loam. The effects are said to have been excellent. Mr. R's crops being equal or superior to any grown round him.

The "salt lye" from soap-boiling establishments, and soap-boilers' waste of every description, can be used with great advantage in the preparation of peat.

Dr. Dana greatly prefers ashes, or the articles above named, to lime. He does not, he says, "go for lime, but for soluble alkali. Carbonate of lime alone is not expected to produce immediate results, and seldom has, nor can be expected to produce visible effects in the first year of its application. * * * Alkalies and peat or swamp muck, are within the command of almost every farmer. Lime is not (always) within reach, and besides, requires no small skill in its management."

Dr. D., however, recommends that experiments be made with what he calls a "soluble salt of lime," which is prepared by mixing lime with salt. He advises the manufacture of a compost as follows:—

"Take one bushel of salt and one cask (four bushels) of unslacked lime. Slack the lime with

the brine made by dissolving the salt in water sufficient to make a stiff paste with the lime, which will not be quite sufficient to dissolve all the salt. Mix all the materials then well together, and let them remain together in a heap for ten days, and then be well mixed with three cords of peat; shovel well over for about six weeks, and it will be fit for use."

Twice turning the heap over would probably be sufficient. The cost of this compost,—reckoning the peat at fifty cents a cord in the bog, and charging one dollar per cord for digging and carting it, the salt at sixty cents a bushel, the lime at one dollar and twenty cents per cask—would be \$6.30 for three cords, or \$2.10 per cord. In general, however, the peat would be of trifling value before it was dug, which would make the cost of the compost less.

3. The mixture of peat with animal bodies, where they can be obtained, forms a compost of the most powerful kind. In some instances, slaughter-house offal, fish, the carcasses, of horses, and other animals, may be obtained with little or no expense. They should be at once surrounded by peat, if that substance can be had—if not, vegetable refuse and earth will absorb the gases which are disengaged by putrefaction. Dr. Dana says, "it has been actually proved that a dead horse can convert twenty tons of peat into manure more lasting than stable dung." Without vouching for the absolute correctness of this rule, the writer can say that his own experience has convinced him of the great value of animal matters in preparing peat for manure.

4. When the substances above named cannot be obtained to advantage, *charring* peat has been found a useful process. Peat and peat rubbish, such as tussocks, and turf mixed with the roots of bushes, may be either burnt, and the ashes spread on land, or they may be only partially reduced by fire, so as to admit of their being used for manure. Clear peat may be carried in large quantities at a small expense. The peat should be first partially dried; then a fire may be kindled, and the lumps of peat gradually placed round. When the fire is fairly kindled, it should be kept in a smothered state, because if it breaks out in a blaze, it will reduce the peat to ashes, instead of leaving it in a charred or half-burnt state. Two hundred bushels of this peat charcoal per acre, is considered equal to a dressing of ten to fifteen tons of yard manure. This, however, no doubt depends much on the quality of the peat. The heat which the peat goes thro' dissipates its acid, and reduces it to a pulverized state, in which it benefits vegetation immediately.—*Cultivator*.

At the Utica (N. Y.) Woolen Factories, from 350,000 to 375,000 lbs. of fleece wool are required annually for manufacturing, at a cost, generally, of about \$125,000. The cloth manufactured daily exceeds 450 yards. The quantity

of goods sold each year will amount to upwards of \$300,000—whereas, the cost of buildings, machinery, lots, &c., does not exceed \$75,000, the whole of the machinery being now in full operation. The wool purchased since 1st June last, by the company, is about 384,000 lbs., costing about \$115,000.

Improvements in Agriculture.

The following glance at some of the improvements which have been made in agriculture within the last fifty years, is from the pen of Alexander Walsh, Esq.:

The Plough.—In this implement the advance in thirty years has been truly astonishing. There is scarcely less difference between the neat cast-iron plough of the present time, and the clumsy wooden article used for the purpose at that period, than between that and the iron pointed crotch stick used by the ancients. In the ease of working and the effect produced on the soil, every man competent to judge will admit, that the difference effected by improvement in the last thirty years, is equal to fifty per cent.

Threshing Machine.—Experience shows that the farmer who gets out and sells his grain in autumn, admitting that the prices are the same, realizes at least ten per cent more than he who does not dispose of his crop till the following spring. But it may be safely asserted, that in grain growing districts, the whole force of the farm, if devoted to that object alone, would not be able to bring his grain into market in the fall, if threshed by hand. Hence the threshing machine has come to aid, and does the work so much better and quicker than it can be done by hand, that the getting out of a thousand bushels of wheat is counted a small affair.

The Horse Rake.—With this instrument, on land fitted as meadows always should be, one man and a horse will do the work of six men with hand rakes. The value of this labor saving machine will not be disputed by those who have tested its power when time presses, or storms lower over the hay-field. It is not less valuable as a gleaner in the wheat and barley stubble, where no care can prevent a quantity of grain being left, surprising to one who has never gleaned with the horse rake.

Agricultural Associations.—The splendid agricultural improvements now here and there exhibited, are the results of Agricultural Journals and Agricultural Associations, where enterprising individuals meet periodically, and by interchanging their ideas, increase the general stock, in at least the compound ratio of their numbers; each one returns home with the knowledge possessed by the whole, and with commensurate stock of new suggestions for future experiment and reflection. The spontaneous operations of the human mind in an unassisted state, require ages to arrive at results which the united efforts

of numerous individuals, excited by emulation would produce in, perhaps, a few days. Most other employments lead to association, while the farmer remains in an isolated state, scarcely regarding the operations of his neighbor.

Agricultural Associations of this and other States have already effected wonders, and these wonders are now becoming the joint stock of the Agricultural Society of this State, which has been got up by the unremitting and persevering exertions of a few gentlemen, who have thereby conferred lasting benefits upon their countrymen.

Indian Corn.—The benefits of skillful cultivation are shown in the improvement of the corn, as much perhaps as in any other way. A crop of seventy-five bushels per acre, is now as common as fifty was a few years ago; and there can be little doubt that 100 bushels per acre are now oftener reached than were 70 at that period.

Weight of Cattle.—The records of the Smithfield market in London, prove that within one hundred years, the average weight of the cattle killed for that market has nearly doubled, rising from between four and five hundred to between seven and eight hundred, and the greater part of this increase has been in the last forty years. It is calculated that the cattle offered at the Brighton market, near Boston, average at least fifty per cent more at the present time than they did twenty years since. This improvement we owe to the knowledge brought to bear on the breeding of cattle, and agriculture generally.

Improved Pigs.—Here is an improvement, which no one, however slightly acquainted with the animal can deny. The dullest eye can distinguish between the round, fat, beautiful Berkshire, and the thin, lean, long-nosed, and long-legged hound-like creature which seems more fitted for the chase than the sty. The farmer feels the difference in his corn crib, and still more in his pocket. The difference in the cost of feeding and in the pork made, between the improved varieties & those generally fed twenty-five years since, is not less than forty per cent. This is the result of skillful selection and crosses.

Fruits.—Compare the quantity and quality of the vegetables now offered in our markets, with those exhibited thirty years ago, and the improvement is astonishing. From the growth of the cucumber to the production of the most delicious of our fruits, the influence of science is felt, and the encouragement for further effort, and the certainty of an ample reward, is every where visible.

Roots.—Turnip Townsend, as Lord Townsend, the introducer of the turnip culture into England, was sneeringly called, by the fools that vegetated within the precincts of the court, has added by that root alone, it is estimated, not less than sixty millions annually to the value of English agriculture. The introduction of the potato into general use as an article of food, has only equalled the benefit conferred by the establishment of the field culture of the turnip.

Draining Lands.—Thirty years since, occasional attempts were made to open drains, but they were without system or skill; were principally confined to the worst swamps, and frequently failed of producing the desired effect.—The light which geology has thrown upon the nature of springs, and the effect which chemistry applied to agriculture has shown must be the result of stagnant water or wet soils on the cultivated plants, has demonstrated the best method of draining, and its necessity, and rendered fertile millions of acres that were wholly worthless before. Draining is one of the most valuable of modern agricultural improvements.

From the Farmer's Cabinet.

The Advantages of having Field-work always in a Forward State.

The farmer who "takes time by the foretop," and drives his business, enjoys a kind of independence which he never can feel, whose business drives him. The winter is approaching, when if it be improved, much, very much may be accomplished to forward the spring operations. The following observations are to the point, and various useful hints may be taken from them, to accelerate the oftentimes hurried claims of early spring. They are taken from *Stephens' Book of the Farm*.—Ed.

"Who breaketh timely his fallow or lea,
Sets forward his husbandrie many a wave.
This, timely well ended, doth forwardly bring
Not only thy tillage, but all other things."—T. S. S. E. R.

The season—*early spring*—having arrived when the laboring and sowing land for the various crops cultivated on a farm of mixed husbandry are about to occupy all hands for several months to come, the injunction of old Tusser to undertake them in time, that each may be finished in its proper season, should be regarded as a sound advice; for whenever your field labor is advanced ever so little at every opportunity of weather and leisure, no premature approach of the ensuing season can come upon you unawares; and should the season, on the other hand, be delayed beyond its usual period by natural causes, you will be ready to proceed with your work whenever the weather proves favorable. When work advances little by little, there is time to do it effectually; or, if it be not then executed in an effectual manner, you have yourself to blame for not looking after it. When I say, however, that work may be advanced little by little, I do not mean that it should be done in a slow, careless manner, as if the work-people were unimpressed with the importance of what they were doing. The advantage of doing even a little is that whatever is done is not to do afterward; and that a little may be done as well, and in as short a time, as if it had been done as a part of a great operation. In this way, even if only one man is kept constantly at the plough, he would turn over, in the course of a time considered short when looked back upon, an extent of ground almost incred-

ible. He will turn over an imperial acre a day, that is, six acres a week, twenty-four acres in a month, and seventy-two acres in the course of the dark and short days of the winter quarter.—All this he will accomplish on the supposition that he has been enabled to go at his plough every working day; but as that cannot probably happen in the winter quarter, suppose he turns over fifty acres instead of seventy-two, these will still comprehend the ploughing of the whole extent of ground allotted to be worked every year by each pair of horses when the farm was taken. In fact, here is a large proportion of a whole year's ploughing done in a single, and in the shortest quarter of the year.

Now, a week or two may quickly pass in winter in doing things of little moment, and which, in fact, amount to time being thrown away; such as sending away a rake of all the draughts to a stock corn market, on a day when there is little prospect of disposing of the grain, and when they would have been better employed at home at the plough; or driving some material on the farm which would better and easier be done when the ploughs are laid idle at any rate by frost; or in setting men to the corn-barn to thresh or clean corn, and laying the horses idle for the time; or in contriving some unimportant work to fill up the time for half a day, until the frost thaws a little on the lea, because it would give too much trouble to take the ploughs from the lea to the stubble field, if there be any such at the time.—Sharpening and setting irons differently may form a reasonable excuse for shifting the ploughs from a stubble to a lea field, but no such excuse is available in neglecting to make the opposite transference. Such omissions and instances of misdirected labor are too much regarded as trifles in winter; but it is undeniable that they occupy as much time as more important work; and in a season, too, when every operation of the field is preparatory to one at a more busy season.—Occasionally the state of the work will force the consideration on the farmer, that it is not so far advanced as it should be, or even as he could wish; still, instead of pursuing a different course from that which has given rise to the reflection occasioned by the delay, his unsatisfied mind consoles itself with the assurance that when the season for active work actually arrives, the people will be able to make up for the lost time. This is, however, mere delusion; for if work can be made up, so can time, the two being inseparable; and yet how can lost time be made up, when every moment of the year has its work to perform, and when that period, long as it is, is usually found too short in which to do *every thing* as it *ought to be done*? "There's the rub." For time eludes pursuit, and brooks no interruption; but neglected work, though attempted to be overtaken—and it may be overtaken before its issue—still the race will never terminate in a satisfactory manner. The neglected work may, no doubt,

be done in a short time—in an unprecedentedly short time; but in that case, it is the time in which the work is done that is boasted of, not the work itself—the measure, and not the thing measured, which is held up to view; and yet, time being the standard by which all well executed labor is measured, it cannot be deprived of that property, whatever devices may be used to make it go beyond its steady pace. You should remember that its pace is the same in winter as in summer, and the extent of labor, measured by the length of its tread, ought to be as great in winter as in summer, otherwise an irreclaimable error is assuredly committed in that season.

Convinced that field-labor should be perseveringly advanced in winter, whenever practicable, I am of opinion that plan is good which appoints ploughmen to different departments of labor; some to work constantly on the farm, others occasionally to go from home; some to be constantly, or nearly so, at the plough, others frequently at the cart. Thus the benefits of the subdivision of labor may be extended to the farm. When a certain proportion of the draughts are thus set aside for ploughing, that most important of all operations will not only be well done by those whose special duty it is to do it, but perseveringly and judiciously done. This proportion is only legitimately employed at any other work when there is no ploughing for them to execute.—Ploughing being a steady occupation, not subject to the irregular action of the cart, can be performed by the older men and horses, who cannot so well bear the shocks of carting as younger men and horses.

LIME WATER FOR HENS—Accidental discovery. During the last season, Mr. Joseph Wilcox, of this town, having occasion to administer lime water to a sick horse, inadvertently left a pail of the preparation in his barn, which remained there for some months, serving as a favorite drink for his hens. He soon afterwards found that the laying of his hens was apparently increased to a considerable extent. Becoming convinced of the importance of the (to him new) discovery, he has, during the present season, kept his hens constantly supplied with lime water, placed in troughs within their convenient access, and the result was an increase in eggs of nearly four-fold as compared with previous experience. He is willing to share the benefits of the experiments with his neighbors, if they choose to try it; and hence this publication. The newness of the discovery (though it may not now be new to all,) is claimed only as applicable to the mode of imparting the lime in this case—its use in another form for the same purpose, having been previously understood by many.—*Wayne Sentinel.*

Durability of Manure.—A writer in the N. Y. Farmer and Mechanic states that he has noticed the bottoms of coal-pits, between 60 and 70

years after the burning, so fertile that they invariably bore heavy crops of grass or grain. This manure, it is known, consists of burnt earth, ashes charcoal &c. Common barn manure becomes nearly or wholly exhausted in a comparatively short period.

Feeding Boxes for Cows.

The annexed figure represents a cheap and good feeding box for cows, which has been found very convenient in foddering them with hay, or

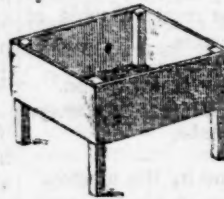


FIG. 18.

other winter food. It is six or seven feet square; the height is about two feet and nine inches, for cows of common size—it must not be too high for them to reach easily over the side, and not so low that

they can jump into it. The depth of the box is about fifteen inches. There are two cross pieces only, morticed into the posts, to stiffen the whole and support the bottom boards. Four cows will eat from it at once; and it will be impossible for them to tread the hay under feet and waste it.—A common workman will make one in two or three hours.—*Cultivator.*

Root Slicer.



Persons owning large farms, and having many cattle to feed with roots, will doubtless find it cheapest to have good root-slicing machines, costing from ten to twenty dollars. But for farming on a more moderate scale, the owners will find them by no means necessary. The figure represents a tool, not costing more than a dollar, which by a single stroke on a turnep or potatoe, will chop into four pieces; and if the roots are placed in a square plank trough or box, rapid strokes with this tool will cut nearly as fast as some of the more costly machines.—*Id.*

To Young Mechanics.—You who would prosper in business have only two rules to live up to, to ensure success.

First, do your work as your customer wishes to have it done. The other rule is, to do it by the time you promise to have it done. These two rules fully complied with, and there is little danger, if any, of failure.

But reverse this plan, and your customers will soon be few, except those who would take anything, at any time, and in any season, provided they can get it on credit; and for such customers you may toil until you have *five outs to one in*, viz: Out at the heel—out at the toe—out of money—out of clothes—out of credit, and—in debt. *Dover Telegraph.*

Planting Fruit Trees.

BY T. MCWHORTER.

MESSRS. EDITORS:—I have thought proper to forward this article at this time, since the highest authorities advocate *Fall Transplanting*.

In our own practice for this western country, we prefer to remove the tree from the nursery, with its greatest possible amount of roots, as soon as it has closed its growth in autumn. Cut off the ends of the broken roots, prune the top, strip off the leaves, dip the roots in a thin mortar, and bury the trees root and branch. As soon as the plow can be started in the spring, we remove the earth from the tops, raise them a little, leaving the roots covered—litter a little straw over them, so as to give them but a partial exposure to the atmosphere for the first few days, when the straw is removed, and the trees planted out immediately, or left in that position until the buds are swollen.

It adds much to the beauty of an orchard to plant it in perfect order, which is something difficult to do unless gone at rightly.

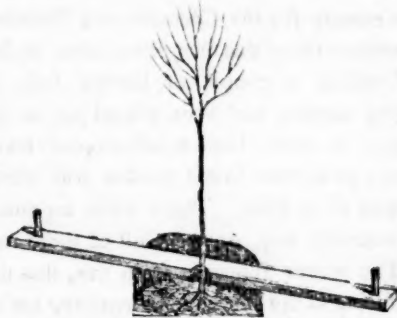
I will briefly describe my own practice which may assist some. The ground is first ploughed *deeply* and harrowed. Then we measure off the ground and set stakes 2 or 3 feet high around the outside, where the outside rows of trees are to stand, and get them right.

We then cut up corn stalks about a foot long, (broom corn stalks are best if convenient,) and set one where each tree is to stand in the interior, and thus fill out the plat of the orchard. One hand carries the pieces of stalks in a basket, while two others, by sighting across each way at the same time by the outside stalks, direct him by motions where to set them.

If the ground be uneven, higher stakes may be necessary around the outside, or a row of stakes through the middle may be required; and on uneven ground the hand that sets the pieces of stalks will need a long straight staff, and hold that until told where to set it, then in its place a piece of stalk may be set.

Next, to get the tree precisely where the stake or piece of stalk was set. To make this sure, we use what is called a *replace*, which we consider almost indispensable in transplanting. It is simply a narrow piece of board, say 5 feet long, with a hole bored through each end, and another in the middle, which is cut out on each edge to form a notch. The replace is laid on the ground with the stake or piece of stalk in the notch.—Then little short stakes that will pass freely thro', are set in the ends & pushed firmly in the ground; the replace is then lifted up, leaving the little stakes undisturbed in the ground; the corn stalk thrown aside, and a sufficient hole dug somewhat deeper than the tree is to set, and partly filled with top soil, and on hard soil should be both deep and wide. The replace is next laid down across the hole exactly as before, on the little stakes that

were left sticking. Then the tree, after having the roots dipped in a thin mortar of our prairie soil, is set in the hole, and placed in the notch. Meantime we observe by the replace how deep to set the tree, which in general should be but little deeper than it stood in the nursery; or if it should be in a low spot, not so deep, but the earth subsequently raised around the tree.



The hole is filled with loose top soil, not hurriedly, but compactly filled among the roots, which should be placed in their natural position. The hole being filled and tramped a little, the replace and little stakes are removed, and a few inches of loose earth being added, the work is completed.

The replace answers three important purposes. 1st. It places the tree precisely where the stake stood. 2d. As it shows the level of the ground, we see by it how deep to set the tree. 3d. It holds the tree upright when placed in the hole, and answers the place of an assistant for that purpose; and if the wind should be blowing, (a thing not uncommon with us,) the practitioner will soon learn to turn the notch towards the wind—*Prairie Farmer*.

Notes from the Horticulturist for October.¹

We abstract from the last number of this excellent periodical a few items which will prove of interest to our readers.

Mulching.—A correspondent says: "I have this season found by experience the value of *mulching* transplanted trees. I planted about 150 trees in an orchard in very good but rather dry soil. They were all planted with equal care, but about one-third of them I *mulched*—i. e. covered the surface of the ground after planting with six inches of litter. They all started alike.—Among those not *mulched*, I have lost fifteen, while there has not been a single death among those *mulched*. Probably they would all have grown had the month of July been cool and moist; but when the hot weather came, many of those not *mulched* dried off. I consider, from observation this season, that *mulching* is preferable to watering."

Mildew in the Peach Tree.—An extract from the Gardener's Chronicle recommends the planting of chamomile under peach trees as a preventive of mildew; and in confirmation relates instances of trees which had for years been infested with mildew, becoming entirely free from it after chamomile had been planted.

A new remedy for the Curculio.—A Philadelphia subscriber states that two plum trees, under each of which a couple of barrow fulls of fresh horse manure had been placed just as the fruit began to swell, bore a full crop of fruit, while every other tree in his garden was stung and dropped all its fruit. There were no punctures or scarcely any, on the fruit of these two trees. The writer supposes from this, that the pungent fumes of the fresh stable manure, are so offensive to the curculio, that it avoids the trees under which it is placed.

To this the Editor adds some corroborative evidence. He says: "We observed some time ago, with some surprise, that upon a couple of large nectarine trees, growing directly against a fence which shuts in our stable yard, not a single fruit was punctured by the Curculio, though other nectarine trees, sixty or eighty feet distant, did not escape."

Protecting tender Roses in Winter.—Collect a number of cedar boughs, and stick them around the bushes, drawing them together into a cone at top, and slightly tying them there. The rose does not want protection from cold in our climate, but the tender kinds must be shielded from sleet and snow, and the cedars do this effectually.

The Early Joe Apple.—This is recommended as a capital summer apple—the fruit beautiful in appearance, and the flavor that of the most delicate dessert apple, while the tree is a prodigious bearer.

The Ida Green Gage.—A new plum, a seedling of the Green Gage, originated on Mount Ida, near Troy, N. Y. This fruit the Editor regards as a decided acquisition, and describes it as follows: "Fruit roundish, strongly resembling the Green Gage in general appearance, but one-third larger. Suture very faintly marked half round. Skin of the color of the Green Gage, but the sunny side washed with purplish red.—Stalk nearly an inch long, rather slender, inserted in a very slight depression. Flesh greenish amber, very melting and juicy, separating freely from the stone, and of the sprightly luscious fla-

vor of the old Green Gage. Stone small. It ripens about the same time with the Green Gage, or a few days later."

Culture of the Peach Tree.—A correspondent, alluding to the common impression that a thin, sandy loam is best for the Peach, states as his own belief, based on some observation and practice, that no soil will grow the best peaches, i. e. the largest and finest flavored—except it is good *wheat land*. He recommends subsoiling land preparatory to planting a peach orchard, this to be followed by manuring with a strong compost of lime and peat, and generous culture. He is also in favor of *shortening in* the Peach, that is, cutting off about half the length of the last summer's growth of branches, which is to be done the last of February, or as early as possible in the spring.

From the Prairie Farmer.

The Grub in the Head of Sheep.

The Michigan Farmer denies having recommended the injection of substances up the nostril of the sheep for dislodging the grub. Our assertion was based on an article in some newspaper, we forget what, which appealed to the M. Farmer as authority. It is very likely that the said newspaper article was founded on somebody's recommendation, found in the Farmer's columns, for which the editor is in no sense responsible.—We therefore take that all back. [Our correspondents are guiltless as well as we.—ED. MICH. FARMER.]

With regard to injecting substances for killing the worms, the matter *has been tried* by competent persons in more than one instance. Dr. J. Barstow of this city, who put us on the track of this investigation, informs us that in Maine, where he was for many years a sheep keeper, he, with others, tried the thing to their satisfaction—upon living sheep and upon dead sheep—but that by no possibility could any substance whatever be forced into the frontal sinus. The point of the syringe could not in the living sheep be made to enter the passage to the cavities of the sinus; and in dead specimens where it was so entered, and the liquid discharged, instead of being thrown up the cavities, it fell backwards into the throat.

Is not this reasonable, from the anatomy of the sheep's head? Just think of reaching a worm in a sheep's *horn*, by a liquor squirted up his nose. The idea is absurd to a man who has dissected the head of a sheep.

Manufacture of Peppermint Oil.—A correspondent of the Syracuse Journal states that there is more Peppermint manufactured in Wayne county, in this State, than in all other parts of the United States. The writer states that a com-

pany of manufacturers of the oil from New York, have recently purchased the manufacturing establishments in Palmyra, with all the Mint now growing, and have also bound those engaged in the business not to grow the mint or make oil for a certain number of years; for all which they have paid \$200,000.—*N. Y. Farm. & Mechanic.*

Solvent action of Rain Water on Soils.

Condensed from the Philosophical Magazine.

In the autumn of 1844, it occurred to John Wilcox, Esq., of East Lothian, where the system of thorough drainage is extensively carried out, that the drainage water during its percolation of the soil must necessarily dissolve out and carry away a great portion of soluble constituents of it, which by the practice as at present followed, are carried off the land, and consequently lost to the farmer. He accordingly, between that time and the following spring, took advantage of the fall of rain, subjected several samples of drainage-water he had collected, to chemical analysis, the result of which was quite sufficient to show that his conjectures were well founded. During the autumn there fell about the usual quantity of rain. On the 16th of May, 1845, he collected some drainage-water, from a field which had lain plowed in winter fallow, having been prepared a few days before for seed, and sown with guano and barley. From this sample of water, 18 pounds, on evaporation, gave 27½ grains of solid residue, or about 1.44 grains to the pound, which were composed of the following ingredients:—

Grains.	Grains.
Organic matter, &c.....7.8	Chloride calcium.....2.167
Silica.....0.8	Carbonate of lime.....2.7
Silicate of alumina.....0.2	Phosphate of lime.....3.1
Peroxide of iron.....2.25	Phosphate of ammonia.....0.45
Phosphate of magnesia.....1.8	Loss.....2.088
Magnesia.....1.69	
Chloride of sodium.....2.615	27.5

From the above experiment it would appear to be expedient for the farmer to avoid using large quantities of soluble manures, at a time, on porous, leachy soils; and instead of giving his land sufficient manure to last two or three seasons, to divide the quantity, and apply it in as small a proportion and as frequently as the nature of his crops will permit.

It is always bad policy to apply a large dose of soluble manure to any land, whether leachy or not. We feed plants just as we do animals—give them all that they need and will consume in organizing their various tissues, and no more.

When we would learn the present productive value of a soil, it is our practice to put from fifty to seventy-five pounds of it into a clean zinc or tin vessel, and cover it with pure rain-water, warmed to about blood heat. In twenty-four or twenty-six hours this may be drawn off, filtered and evaporated to dryness; and the residuum which the water dissolved, analyzed.

Let me suppose the analysis gave a result like the above, which we desire the reader to study;

and that we wished to raise a crop of sweet potatoes on the land examined. Sixty per cent. of the ash of the tuber of this plant is carbonate of potash; while over eight per cent. of the other forty are sulphates and chlorides of the same alkali. Look now in the above table for *potash* and *sulphur* in any form. They are not to be found. What is the inference? Plainly that good hard wood ashes, which contain both potash and sulphuric acid, should be applied. Suppose you apply manure made from plants that contain but one-sixth part of the potash found in sweet potatoes, with a view to organize the latter crop. Is it not clear that you must waste five-sixths of your manure to supply in your defective fertilizer all the potash needed by the sweet potatoes? This waste of manure is one of the most calamitous defects in modern agriculture.—If one hundred pounds of wheat straw contained the same elements, and in the same proportions which exist in one hundred pounds of wheat, there would not be the least difficulty in transforming one hundred parts of straw into a like weight of grain. But you might as well undertake to make one hundred pounds of wheat straw into good wheat bread, as into wheat, by any process of rotting and reorganization. We know some farmers who succeed much better in producing great crops of corn-stalks and blades than in harvesting a large product of shelled corn.—Some grow large wheat-straw, but a precious little of plump wheat. Others can grow neither straw nor wheat.

There is no other remedy for this than to study closely what the soil lacks, and the crops must have to bring them to full and perfect maturity. The raw material must be precisely adapted to the uses of nature in organizing, not merely the roots, stem, leaves and heads of the corn or wheat plant, but to form the little germs developed in each seed. From a lack of ingredients to make these germs for the successful transmission of the vital principle in seed from generation to generation, thousands of farmers lose half their labor and half their income. To test this matter, form two artificial soils, and leave out of one the elements found in the germs and gluten of seeds, and add to the other all that nature requires to perfect the whole plant when ripe. You will then see the impossibility of making a part of any thing equal to the whole of it. If this vain attempt be not labor lost, we know not what ought to be so considered. Is it not the dictate of plain common sense carefully to adapt one's means to the end to be attained? This principle forms the basis of agricultural science.—*Southern Cultivator.*

One way to preserve cabbages.—Cut the head from the stump, and pack closely in a cask, taking care to fill up all the vacancies with chaff or bran, and keep in a dry cellar.

Culture of Grapes.

Grape Vines may now be transplanted with safety, but in order to be successful in the cultivation of this delicious fruit, attention must first be given to the preparation of the ground. Grapes require a light, rich, moist soil, but the water should not be permitted to remain about the roots. Here, in Detroit, where the soil is mostly clay, I have adopted the following plan, which succeeds admirably. I dug the clay out from a border three feet deep, three wide, and ten long. I filled about a foot and a half of the depth of this hole with bones and oyster shells. I placed them deep in order to drain the water from the roots. They also serve to keep the soil light, and to enrich it. The balance I filled up with a mixture of loam, sand, and well rotted manure. I have several vines planted in this way, and each of them has produced this season an abundance of the highest flavored fruit.

I am now preparing as above two borders, each six feet wide and one hundred long. I intend to mix with the soil in these borders, a good quantity of ashes as a preventive of mildew.

Pruning.—I prefer a warm day in the month of November for pruning the hardy varieties.—The leaves by this time have fallen, and the wood is fully ripe. If left later than November, the frost makes the vines so brittle that it is difficult handling, without breaking them.

If I plant a young vine this fall, I cut off all the shoots but one, close to the main stem. This one, being the strongest and healthiest, I leave to produce the wood for the next season, cutting it back to three buds. In the spring, if each of the three buds start, I rub off one, and train the other two horizontally, and in opposite directions, and rub off all lateral shorts as they make their appearance. This throws the whole strength of the vine into the two branches, or runners. The vine being one year transplanted, in November I cut the two runners back, leaving but three buds to each. In the spring following, if all the buds start, I train the two end ones horizontally, cut out the middle ones, and train the other two upright, and I will probably get one bunch of grapes from each of the upright shoots. If any more than this should appear, I would take them off. Also take off all lateral shoots,—but let the main runners run as far as they will. This fall, the vines being two years transplanted, cut the runners back to the solid, well ripened wood. The next spring, train the vine as before. As the buds upon the horizontal branches start, rub off all upon the under and leave not more than four upon the upper side, train these upright as before, and each of the upright shoots will bear three bunches of grapes. This fall the vine being three years transplanted, cut every alternate shoot to within two buds of the main runner, and the others to within three buds. The next season allow the shoots that have three buds to run and bear fruit, the others must not be allowed to

bear this year, but at the next pruning, cut the branches that have borne fruit this year, down to within two buds of the main runner, and the others to within three. By this method the fruit bearing branches are alternated every year, and the vines are kept within reaching distance.

J. C. H.

Detroit, Oct. 22, 1847.

From the Farmers' Cabinet.

Grape.

The grape is of the most simple and easy cultivation; once give it a start and it will take care of itself. Some years since I planted two vines at opposite corners of my house. After one year's growth, I directed one branch up the house, and carried others under ground to the next desirable situation, between windows, and tacked the end up, and in a few years I had the sides of my house covered, and barrels of fruit of the choicest kinds. They generally ripen sooner on the house than on trees or arbors, and on the south-east next, north-west last, having a succession from early to late. Some years since there was plenty on the house when those in gardens were killed. If too much trouble to tack up the vine on the house, plant a few and start them up trees, and in a few years they will produce largely without even pruning. Do not omit to leave some sprouts near the ground, and the following spring put part under ground, leaving the end out, and in one year it will take root; if two to four joints are put under, it may, when taken up, be cut in two, and thus supply neighbors who want them. This mode of increasing grape vines takes very little trouble, and is as certain to grow as the parent stock. The plan of letting them run on trees, is by no means objectionable. The Isabellas this year are ripening as fast on trees as elsewhere, and large and full on the vine. If it be desirable to increase the number of vines, instead of laying down as mentioned above, take a long sprout from the root of the growth of the preceding year, dig a ditch six inches deep the length of the vine, laying the dirt on each side if level, if side hill, put the dirt on the upper side, to keep rain from filling it up too soon; fasten the vine in the bottom of this ditch, leaving it uncovered until the sprouts from each joint raise a foot or more, when the vine may be loosely covered with earth, and by rubbing off the ends of those growing too fast, a root may be raised from every bud or joint.

Large vines may be greatly improved in some situations by laying down the main vine under ground six inches, say from three to ten feet or more, and bring the top nearer the ground, and in an open space or on a different tree, it improves the fruit the same year if done early.

These hints are given not to induce neglect of proper culture, but to induce farmers—who always have enough to do when sought out to be done—to plant and protect one year. Hundreds

of farmers west, and many east, have not a vine on their farm; when, for the amount of labor and cost, I know of nothing that so much contributes to the comfort of their family and friends. A.

From the Farmer's Library.

Who is that young Man ashamed of the plough?

We sometimes hear of young men too proud to be seen laboring in the field—indeed, we are not sure that we have not seen such. Now, nothing can justify any man in eschewing manual labor on his farm, unless it be that he can be otherwise more profitably employed in the superintendence and direction of the labor of others, or that easy circumstances allow him to indulge his leisure in the luxury of acquiring knowledge by converse with men of superior minds, personally or from their writings.

Do men of narrow minds who despise labor remember that in Rome, after the expulsion of the Kings, *seven acres* were allowed to each citizen? Curius Dentatus, Fabricius, Regulus, and others distinguished as the most deserving among the Romans, had no larger estates. Cincinnatus, according to some authorities, had only four acres. On these limited spaces they dwelt, and cultivated them with their own hands. Until he tries it, no one knows on how little land all the essential comforts of life may be produced.

It was literally from the plow that Cincinnatus was summoned to be Dictator; and the Samnian Ambassadors, when they went to Curius Dentatus to sue for peace, found him on his farm, cooking his repast of vegetables in an earthen dish. To purchase easy terms they offered him vessels of gold, but the noble Roman disdainfully refused their offers. "I prefer," said he, "my earthen pots to your vases of gold. I have no desire for wealth, and am satisfied to live in poverty and *rule over the rich.*" Can any one, pray, tell us where any of the old Dentatus stock can be found?

Farmers of the United States!—you for whom alone we care and labor—if you can find the least sprinkle of that old blood, seize on it as you would on a scion of the choicest fruit about to become extinct, and try to breed back on it, until we can get a stock of honest men for public functionaries of every sort, whose study shall be to diffuse knowledge, to inculcate economy, and to promote peace, and such distribution of the public monies collected from the landed district, as shall enlighten and purify the mass of the *cultivators of the soil* until the wisdom and forecast of the constituency shall be reflected by all our public men and public bodies. If ever you can get, for instance, one of the old Washington stock, one who will tolerate freedom of thought and of speech, and go exclusively for the Constitution and the public good, persuade him to hold on until his new and salutary system of management of the public farm shall be thoroughly developed—until an odious system called the "spoils

system," worse than the Canada thistle, shall be extirpated from the whole earth, and the anxieties of all our young farmers shall be withdrawn from the tree of patronage and the fruit of office, which turneth to ashes in the mouth, and their contemplations be turned *on their own condition, business, and rights*, and to the means of their vindication and improvement.

In this exhortation there is no narrow suggestion of spirit of party. It is intended and believed to have a direct bearing on the prosperity of practical Agriculture; for, depend on it, as respects the ultimate welfare and safety of your pursuit, they rest, as does public virtue itself, upon *knowledge*! How many idle young men have we, standing where idleness ever does, on the brink of ruin, and who could get ten times as much land as satisfied a Cincinnatus or Dentatus, who are yet ashamed to labor, but not ashamed to enroll their names on the list of the most abject of all slaves—slaves whose daily bread depends on the capricious breath of arbitrary power!

Michigan Fruit in New York.—Some apples sent to the Fair of the American Institute, N. Y., by the Detroit Horticultural Society, appear to have taken the natives there by surprise. The N. Y. Express speaks of them thus:—

The Fair of the American Institute.—We have before us four big, bouncing apples, the very best of the sort—and where do you think they come from? New England? No!—New York, Ontario, or say Monroe? No!—Where then? Why, they come all the way from Michigan. They are the present of the Horticultural Society of Detroit to the Fair of the American Institute, and come from the town of Plymouth, and were raised by G. Barker, Esq., a New York merchant, who retired, some years ago, to try his fortune in Michigan, as a farmer. We expect to have great pleasure in eating the monsters.

Michigan Fruit in Connecticut.—Some of the fruit shown at the late exhibition of the Detroit Horticultural Society, was taken by one of our townsmen to the Fair of the New Haven County Agricultural Society. In the account of the Fair this fruit is thus mentioned:—

"A plate of fruit from Israel Coe Esq., of Detroit, Michigan, attracted much admiration for their superiority of size and fairness. One of the apples weighed 1 pound and 3 ounces.

Length of clover roots.—Dr. Lee remarks:—"We have roots of this plant, (clover,) that have grown over thirty inches into the ground this season, in search of moisture and mineral food."

Experiments in Wheat Culture.

A correspondent of the Ohio Cultivator gives an account of the following experiments.

I sowed last year two small fields of wheat, one of eleven acres on which I cut down a heavy lot of dead timber, and burnt it on the ground. I broke it up after harvest, stirred it again and sowed it in four portions at four different times—viz: the 23d, 28th and 30th of September, and the 2d of October—at the rate of $1\frac{1}{2}$ bushels of seed per acre, except one acre, on which I sowed 2 bushels. This one acre was much the best; the other portions were about alike in quality, except some of the last that was plowed where the sod was not rotted, and the grass injured the wheat. The variety is called Garden wheat; I have not yet thrashed and cannot say what the yield will be; but I think the acre on which 2 bushels was sown, yielded 25 bushels. This field was not injured by the fly, and my opinion is that the ashes prevented the ravages of the fly; what do you or others think?

The other field was five acres on oat stubble, adjoining the preceding, and the ground equally as good; sowed the 16th September; same kind of seed; and the fly took it so badly that I did not harvest more than 25 or 30 bushels from the whole piece. Now why did the fly attack this, and not the adjoining field? * * *

The above confirms the statement given in Dr. Fitch's Essay, that the Hessian Fly generally gets through depositing its eggs about the 20th of September; which circumstance would account for the fact above mentioned, that wheat sown the 16th was badly injured, while that sown from the 23d Sept. to 2d Oct. escaped.

Preserving Winter Apples.

MR. BATEHAM:—As the time for gathering winter apples is at hand, I will give you my method of saving this fruit, being the result of much successful experience.

I gather the apples carefully by hand, and put them in the barn on some chaff or straw, taking care to avoid bruising them, and let them remain till in danger of freezing, then put them in barrels or boxes in the cellar, carefully taking out all bruised or defective ones. If I want some to keep a long time, I pack them in dry sand, or saw dust that has been kiln dried. Fine shavings, well dried, answer a good purpose. The fruit cellar should be as dry and as cool as possible without freezing. Some kinds of apples require to be handled with extreme care to avoid bruising—such as the Belle Flower and Rambo. —*Ohio Cultivator.*

Yours,

J. T. HIRST.

Flushing, O., Sept. 1846.

Bones.—A ship lately arrived at London from N. York, with 91,500 cattle bones.

EDITOR'S NOTE BOOK.

The Iowa Farmer's Advocate.—This is the name of a new agricultural paper that hails from Burlington, the far off capital of Iowa. H. Gates, Editor, James Tizzard & Co. Publishers. It is a neatly executed and well conducted paper, and we hope its fate will prove that it has not come into existence before its time. It *deserves* patronage. Terms, \$1 a year in advance.

The Missouri Farmer.—A weekly quarto sheet, published at St. Charles, Mo., and, as appears from the Prospectus, the only Agricultural paper in that state. Missouri is old, rich and populous enough to support a paper of the kind, and the low price at which this is offered, (\$1 a year) throws it within every body's reach. We are glad to notice this indication of the spirit of improvement in that quarter.

Both the above new papers have a powerful rival in the *Prairie Farmer*, a well known and long established periodical, which stands ready, nothing loath, to supply the entire far west with agricultural reading—of a good sort, too.

The Western Farmer and Gardener.—This paper has lost its accomplished Editor, the Rev. H. W. Beecher, who removes to Boston. We fear his mantle will not be likely to fall on such capable shoulders. The last number or two has not come to hand. Is the paper deceased?

Prolific Wheat.—The Editor of the St. Louis Republican says he has in his office a sheaf—so to call it—of wheat, the product of a single grain when sown. It numbers 70 stalks, and contains, as near as can be ascertained, 4000 kernels. It is five feet high, and the wheat is of a splendid quality.

The potatoe rot.—Has again made its appearance in this section of the state. We have not yet heard of it in the interior. The disease again prevails in the Eastern States and in Europe. Hence the demand for grain will be likely to be well sustained the coming year, in spite of the abundant harvest in Europe.

Hessian Fly in Lenawee Co.—Our friend, J. Gibbons, of Raisin, Lenawee Co., writes us under date of 10th inst.: "The 'fly' is making its appearance in such vast numbers in early sown wheat in this vicinity, that I am told some of our farmers are plowing it in, in order to re-sow.—Should their new sown crop by this means escape the ravages of that destructive insect, (of which, however, I have strong doubts,) the plan will cer-

tainly be much preferable to plowing in the early sown, a little before next harvest time."

The plan of plowing under the wheat we believe to be the best resource that remains, after the insect has descended in great numbers to the lower joint—provided it is done in sufficient season to admit of re-sowing. But it would be much better to watch for the appearance of the fly as soon as the wheat has thrown out its side leaves, and if found, lose no time in turning on a flock of sheep—the more the better—till the wheat is eaten off close to the ground. The eggs deposited on the leaves will thus be destroyed before hatching. We have not much faith in the efficacy of feeding off after the wheat shows signs of great injury. It would prevent the deposition of any more eggs, but must fail to reach the greater part of those insects that have already got into winter quarters, just at or a little below the surface of the ground. Will any that have used the "wheat decoy" recommended by Dr. Fitch, give us the result?

To keep Cheese free from Maggots.—The papers say, cut out a small square piece in the middle of a cheese, pour in a little pure brandy—repeat this several times as it soaks away—then replace the piece cut out, and the cheese will be permanently protected, and the quality improved.

Native Grape.—Mr. Longworth, in a late communication to the Cincinnati Gazette, makes mention of a fine grape reported to be on a small island, near Oxford, Michigan, and says it is well known to Messrs. Taylor and Dick, who reside in that vicinity. Will these gentlemen, or others who may be acquainted with the grape in question, inform us about it—or still better, send us a cutting.

Lime-water in a Dairy.—Every dairy should have a vessel of lime-water sitting in it, say a half gallon of lime to ten or twelve of water, simply to rinse every thing in. The vessel can be filled up when necessary. It will be sure to remove all acidity or bad odor.

N. Y. State Fair.—The Fair of the N. Y. State Agricultural Society held last month at Saratoga was, on the whole, confessedly a falling off from its predecessors. This is attributed not to any decline of interest, for the number of visitors was quite as great as usual; but to the inconvenient location of the place at which it was held, aside from any main route, and in a section of the state not remarkable for fertility.

Mowing Machine.—Among the numerous labor saving implements exhibited at the late N. Y. State Fair, was a mowing machine, operated by horse power, which is said to be capable of mowing in the most perfect manner from 15 to 20 acres a day. The construction is such that the cutting part keeps its edge, and on a smooth meadow would require sharpening but once in the season. The grass, as it is cut, instead of being thrown into swaths, falls back over the cutter, and lies spread out evenly on the surface of the ground. Mr. J. F. Gilkey, of Kalamazoo Co., who was at the Fair, engaged one of these machines, to be sent on next spring. It is to cut a breadth of ten feet, and costs, if we recollect right, \$120.

Transplanting Trees.—In fall transplanting, the foliage, if any remains on the trees, should be removed either before or directly after they are taken up.

It is now rather too late to transplant cherry and plum trees, as these need time for the roots to take hold before hard frosts set in. With apple, pear, and forest trees, it is less necessary to be early.

Covering the roots with a few inches thickness of manure or straw, will be favorable to transplanted trees, provided care be taken to keep the litter a little away from the trunk, and protect the bark from mice by an application of tar, or by packing the earliest snows firmly around.

Peach trees should never be transplanted in the fall, as they are too liable to winter kill.

"When roots are bruised or mutilated in removal," says Thomas, "their broken and ragged extremities remain open to the introduction of water, and decay follows. If all such parts are pared off smoothly with a sharp knife, the vessels contract, and the wound heals by granulations."

Pasture and Meadow Lands.—With all good arable lands, and especially with such as are well adapted to the growth of wheat, it is clearly policy to take them up as soon as the third year after seeding down. After that time, the product of grass begins to diminish, and to deteriorate in quality. Besides, the oftener grass lands are plowed up, the more is the soil benefitted by the decomposed sod, which is as good as an ordinary dressing of manure. In New England, it is thought to pay well to plow up the sward, and stock down without any intermediate grain crop, merely for the increased product of grass.

To Publishers.

The attention of Publishers is invited to the proposed sale of the proprietorship of the Farmer, as the Editor is desirous of relinquishing the conduct of the paper on account of a protracted disease of the eyes. To any one who feels an interest in the advancement of Agriculture, the Farmer offers an inviting field for enterprise and usefulness.

Remittances

May be made to the Publishers of this paper by mail at their risk—in general, through the frank of the Post-master. Receipts will be returned whenever requested. To prevent delays, subscribers are requested to see that their remittances are actually mailed.

Market Intelligence.

DEER OIT, Oct. 27, 1847.

The price of flour since our last had an upwards tendency until the 21st inst., at which time the price had reached \$5 50, when the arrival of the foreign news, announcing a decline in the European market, caused dullness, and some depression in the market here. Flour is now sold from wagons at \$5—among dealers, at \$5 12½@55 25.

TABLE OF PRICES.

Wheat, bu	\$1 00	Beef, bbl,	\$8 00@11 00
Corn,	37½@40	Pork, do	15 00@15 50
Oats,	22@2	White fish, bbl,	6 00@7 00
Rye,	31½@35	Trout, do	5 50@6 00
Barley, at brewery,	@37	Hams, lb,	6@8
Beans,	75@80	Cod fish, lb,	3@7
Peas,	37@3	Cheese, do	6@7
Potatoes,	20@2	Butter, do	11@12
Onions,	44@50	Salt, bbl,	2 00
Apples,	25@62	Eggs, doz,	8@10
Cranberries,	87@1 00	Hides, lb,	3@6
Hay, ton,	5 00@6 00	Wood, cord,	2 00@3 00
Plaster, ton,	8 50		

NEW YORK, Oct. , 1847.

Genesee flour \$5 56½ @ 5 62½; Western \$6 50 @ 6 56½, and steady.

For prime Genesee wheat, holders refuse to sell under \$1 50, and good Western is held at \$1 40.

Corn is dull at 73@74 for mixed, and 70c. for yellow.

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We have TWENTY-FIVE CHOICE YEARLING BUCKS of our own breeding, Saxon Merinos, hardy and valuable sheep. The price will be \$10 per head, delivered on board of boat at Buffalo, and we will pay 50c per lb. for the wool from them next spring, delivered at the Wool Depot in Buffalo.

T. C. PETETS & BRO.

Darien, Genesee Co., N. Y., Oct. 14, 1847.

Prince's Linnaean Botanic Garden & Nurseries,

FLUSHING, N. Y.

Wm. R. PRINCE & Co., successors of Wm. Prince, and sole proprietors of his great collection of Fruit Trees, &c., will transmit their New Descriptive Catalogues, (36th edition,) with prices to post paid applicants—to purchasers gratis, and to others at \$1 per set. They comprise, in addition to size, color, quality, &c., the *Glands and Blossoms of every Peach*. The specimen grounds contain 200 varieties of fruits, and the trees sold are invaluable to new nurseries for their superior accuracy. A wholesale catalogue for Nurseries with reduced prices. Of Pear trees, 4000 can be supplied in a bearing state on Pear and Portugal Quince, and 25,000 of the usual size.

N. B. The public are cautioned against a deceptive use of our name and title by a man named Winter, and we refer them to our published exposition.

Fruit and Ornamental Trees.

THE subscribers respectfully solicit the attention of fruit growers and dealers in trees, to their large stock offered for sale the ensuing autumn and next spring, consisting in part of

FORTY THOUSAND APPLE TREES,

Of the most esteemed varieties, from four to eight feet high, at \$12 to \$20 per 100; and \$100 to \$150 per 1000. 8,000 trees of the Northern Spy, (one of the very best long keeping apples known,) five to seven feet high, 3½ cts. each, or \$25 per 100; three to five feet high, 25 cts. each, or \$18 per 100. 1,000 trees of the Early Joe, (a new and delicious summer apple; ripens Aug. and Sept.) strong yearling trees 25 cts. each, or \$2.50 per dozen. A number of select varieties are worked on *Paradise* stocks, adapting them to small gardens. These are one year from bud, of vigorous growth.

TWENTY THOUSAND PEAR TREES,

Of various sizes, from three to seven feet high, embracing upwards of 200 of the best varieties to be found. 6,000 of these are on quince stocks, (mainly one year from the bud, but very vigorous,) just right for training as *Dwarfs*, *Espaliers*, and *Pyramids*. A few hundred trees each of the Swan's Orange or Onondaga and the Belle of Brussels, (two unrivalled large rare fruits,) mostly strong yearlings, at \$1 each.

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From four to nine feet high, of the finest sorts, 3,000 of them being 2 years old from the bud, with fine heads. Price \$25 to \$40 per 100. A few hundred fine trees can be supplied, budded on the *Cerasus mahaleb*, forming dwarf trees adapted to garden culture.

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Vigorous and free from all diseases, of 25 best market sorts; at \$12 to \$18 per 100, and \$100 to \$150 per 1,000.

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Orders promptly executed, and trees and plants packed for safe transmission to any part of the United States, Canada or Europe. Priced descriptive catalogues of Nursery and Green House departments sent gratis to post-paid applications.

Orders from the Western states should be forwarded immediately in order that we can ship the trees at the earliest moment they can safely be removed. Packages reach Buffalo in 6 hours from Rochester by Railroad, and are there promptly shipped by our agent, so as to avoid chances of delay.

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Mount Hope Garden and Nurseries, Rochester, N. Y.

September 1, 1847.

MICHIGAN FARMER.

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H. HURLBUT, EDITOR.

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